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uring 3 mm. in length, seemingly more nearly allied in this particular to *B. subaptera*.

The cerci of the specimen figured were unfortunately absent and the defect in the drawing was not noticed until too late for correction. They should project beyond the tip of the supraanal plate a distance about twice the length of the latter.

Vates townsendi Rehn. (Plate III, Figs. 1-2).

Vates sp. Rehn, Trans. Amer. Ent. Soc., XXII, 221 (1901).

Vates sp. Caud., Proc. Ent. Soc. Wash., V, 165 (1903).

Vates townsendi Rehn, Proc. U. S. Nat. Museum, XXVII, 573 (1904).

As indicated by the above bibliography, this handsome insect was twice recognized in the immature state before the adult was made known. The type specimens were taken by C. H. T. Townsend at Zapotlan, Jalisco, Mexico. Its first recognition from the United States was as a nymph from Arizona, but recently the U. S. National Museum has acquired by purchase from the collector, Mr. E. J. Oslar, two mature males from Nogales, Arizona, collected on June 14 and July 18. These specimens are the ones here figured.

APLOPUS* MAYERI, NEW SPECIES.

BY A. N. CAUDELL,

WASHINGTON, D. C.

The Phasmid described and figured by the writer as *Haplopus evadne* of Westwood (Proc. U. S. Nat. Mus., xxvii, 950, 1904) is not that species, the male having been found to be brachypterous. A number of specimens of both sexes were taken in Florida, Dry Tortugas, Loggerhead Key, by Dr. A. G. Mayer. The specimen figured at the above reference is really a male and not a female as there stated. The restored tip of the abdomen however very well represents that of the true female as represented by specimens in the present collection. The female agrees in structure with the male except that the form is more robust and the pronotum and mesonotum are not so smooth and

* *Aplopus* was used prior to Gray's work by Megerle von Muehlfeld but seems to not have been used in a valid sense. Thus Gray's name is not invalidated by it. *Aplopus* being the original spelling, should be used, not the emendation *Haplopus* of Burmeister.

are more thickly spinose, the spines, however, smaller than those of the male. The antennæ of both sexes are about the length represented in the restoration in the figure, the basal segment quite strongly depressed, especially at the base, and considerably thicker than the succeeding ones, the entire antenna gradually tapering to a fine point. The elytra are generally tumid centrally. The males usually, but not always, have the abdominal segments laterally marked longitudinally with white and the margination of the elytra seems quite constant in that sex. As suggested in the former article, the chalky markings of the body are not constant. The end of the male abdomen is very moderately swollen, the seventh and eighth segments subequal, the ninth very slightly shorter, subquadrate, apically subtruncate, mesially very obscurely emarginate; the operculum reaching the apex of the eighth segment. The cerci are very stout, slightly recurved, cylindrical, bluntly terminated organs about as long as the ninth abdominal segment and directed backward, a little downward and scarcely inward. The intermediate and posterior femora of both sexes are usually armed for their entire length beneath on the median line with from five to seven black spines, the apical two moved forward to the anterior carina and opposite them, on the hinder margin, is a single small spine; all the femoræ have the geniculations spinose on both sides, those of the anterior pair the least developed. The anterior femora are armed below on the apical third with a couple of very small spines.

The measurements of a typical pair are as follows: Entire length male, 90 mm., female, including the oviscapt 125 mm.; antennæ, male, 53 mm., female, 45 mm.; mesonotum, male, 20 mm., female, 26 mm.; metanotum, male, 6 mm., female, 6 mm.; intermediary segment, male, 7 mm., female, 8 mm.; elytra, male, 7 mm., female, 8.5 mm.; anterior femora, male, 20 mm., female, 20 mm.; intermediate femora, male, 16 mm., female 17 mm.; posterior femora, male, 21 mm., female, 22 mm.; oviscapt, female, beyond the tip of the abdomen, 12 mm.; median width, mesonotum, male, 3 mm., female, 5.5 mm.; second abdominal segment, male, 2.75 mm., female, 5.5 mm.

Types in the Museum of the Brooklyn Institute of Arts and Sciences, Brooklyn N. Y., and cotypes in the National Museum, Washington, D. C.

In many particulars this species seems near *Aplopus micropterus* but the shorter wings and other less noticeable characters seem to separate them. It is also closely allied to *A. scabricollis* Gray, as

stated in a letter from Mr. W. F. Kirby, to whom specimens were submitted; but that is a larger species with a considerably longer oviscapt in the female. The location of this species in the genus *Aplopus* is merely tentative, the brachypterous males excluding it from this genus unless the male of *micropterus*, the type, is proved to be also brachypterous. In that case the species with macropterous males would necessarily take another generic name.

Class III, ARACHNIDA.

Order II, ARANEIDA.

CHANGE OF COLOR AND PROTECTIVE COLORATION IN A FLOWER-SPIDER. (*MISUMENA VATIA* THORELL).

BY ALPHEUS S. PACKARD, LL.D.,
PROVIDENCE, R. I.

My attention was called to this interesting subject in the summer of 1903, by observing the adaptation or "mimicry" of our common *Misumena vatia* Thorell (*Thomisus fartus* Hentz) to the hues of the petals of the daisy fleabane (*Erigeron annuus*) in blossom at Merepoint, Brunswick, Maine, July 18. It was then my impression that this spider was known to change its color, and I suppose that this took place within a short period—a few days at least—but on trying to find mention of such rapid or any other change of color I was unable to meet with any such notices. As for my own experience previous to last year I have only a vague recollection of seeing many years ago on a tree or flower a yellow *Misumena*. On inquiry of Mr. Nathan Banks, he very kindly called my attention to a brief note by James Angus in the American Naturalist, Vol. XVI, p. 1010, which says: "I suppose you know the little flower spiders, that conceal themselves in the flowers, and seize any unwary insect that may chance to come within their reach. I have generally found them white and yellow. I suspected they changed their color, and by experiment I find that this is so. If I take a white one and put it on a sunflower, it will get quite yellow in from two to three days. I believe they capture almost anything, but they seemed to be partial to the bees. I